

1998 United States Dietary Guidelines for Americans Child Nutrition Programs Implementation Survey

Executive Summary

Prepared for
Nutrition Education and Training Program
California Department of Education
by
Duerr Evaluation Resources
October 1998

Introduction

The Healthy Meals for Healthy Americans Act was passed by the United States Congress in 1994. This federal mandate is part of the School Meals Initiative (SMI) for Healthy Children designed to promote the health of the nation's schoolchildren. It also requires that meals served by National School Lunch Program (NSLP) and School Breakfast Program (SBP) sponsors meet prescribed nutrition requirements by July 1, 1998. These requirements are based on two established national nutritional standards: the 1990 *United States Dietary Guidelines for Americans (USDGA or DGA)* and the Recommended Dietary Allowances (RDA). The *DGA* that apply to child nutrition programs are:

- * Eat a variety of foods.
- * Choose a diet low in fat, saturated fat, and cholesterol.
- * Choose a diet with plenty of grain products, vegetables, and fruits.
- * Choose a diet moderate in sugars.
- * Choose a diet moderate in salt and sodium.

The legislation also outlines a variety of menu planning methods that can be used by SBP and NSLP sponsors to meet the nutrition requirements: United States Department of Agriculture Nutrient Standard Menu Planning (USDA NSMP), United States Department of Agriculture Assisted Nutrient Standard Menu Planning (USDA ANSMP), and Food-Based Menu Planning (FBMP). In 1996, additional complementary legislation was passed. It authorized child nutrition programs to continue to use the 1994-1995 meal pattern or to develop "any reasonable approach" to meet the required nutrition standards. In addition to the menu planning options listed above that are formally approved by the USDA to meet the nutrition requirements, California schools have the unique opportunity to use alternative methods for meeting them through the Shaping Health as Partners in Education (SHAPE) program. These options are SHAPE NSMP, SHAPE ANSMP, and SHAPE RMP (SHAPE Meal Pattern). The SHAPE menu planning options are the first to be approved by USDA under their "any reasonable

approach” guidelines noted above. SHAPE schools work to Revised create quality child nutrition programs not just with menu planning but through nutrition education, by building partnerships, and through a school nutrition policy.

In an effort to determine the progress of NSLP and SBP programs in California schools implementing SMI, the NET Program of the CDE, through competitive bid, contracted with Duerr Evaluation Resources to conduct the “1998 United States Dietary Guidelines for Americans Survey.” The survey targeted child nutrition program directors in public school districts, county offices of education (COE), private schools, and residential child care institutions (RCCIs) who are sponsors of the NSLP and the SBP and was designed to determine California’s progress in meeting *Dietary Guidelines for Americans* and to assist the NET Program and CNFDD with many aspects of program planning and promotion¹. This was the fourth *USDGA* survey conducted by the CNFDD and NET Program since 1989, but the first survey since implementation of the SMI in 1994.

Findings

Table 1 pertains to menu planning options. Respondents were asked to report which menu planning option(s) they currently use; they could include more than one option. Public unified school districts had the opportunity to respond separately for elementary and high school sites.

Table 1
Menu Planning Options

MENU PLANNING OPTION	Percent Using Each (n=1,045)
Food-Based Menu Planning (FBMP)	59%
Computerized or computer-assisted methods (includes the four below)	34%
USDA Nutrient Standard Menu Planning (USDA NSMP)	24%
SHAPE Nutrient Standard Menu Planning (SHAPE NSMP)	6%
USDA Assisted Nutrient Standard Menu Planning (USDA ANSMP)	3%
SHAPE Assisted Nutrient Standard Menu Planning (SHAPE ANSMP)	1%
1994-95 Meal Pattern (traditional meal pattern)	13%
“Any reasonable approach” authorized by law (non-SHAPE agencies)	5%
SHAPE Revised Meal Pattern (SHAPE RMP)	4%
Not sure which of these apply	8%

Note: Percentages do not add up to 100% because of multiple responses.
Question 13

The most common menu planning option used by respondents at the time of the survey was Food-Based Menu Planning (59 percent). One-third of respondents use computerized or computer-assisted methods; the most

common of these methods is USDA NSMP (24 percent). Thirteen percent of respondents reported using 1994-95 Meal Pattern, and eight percent were unsure what menu planning option they were using.

Lowering Fat and Cholesterol

Table 2 displays the changes made over four years in the fat levels of milk served.

Table 2
Type of Milk Served
(by agency type)

	<i>What type of milk or flavored milk did you serve in 1994, and what type do you serve now in your reimbursable meals? (Check all types available to students.)</i>							
	Whole		2%		1%		0%	
	'94	'98	'94	'98	'94	'98	'94	'98
Public Elementary	61%	24%	83%	52%	24%	67%	18%	29%
Public High	79%	30%	84%	62%	29%	67%	34%	46%
Public Unified/COE	74%	36%	88%	53%	28%	75%	32%	49%
Private	55%	18%	74%	70%	13%	30%	13%	30%
RCCI	62%	35%	68%	67%	12%	35%	13%	21%
OVERALL	66%	31%	81%	57%	22%	60%	22%	35%

Note: Percentages are weighted.

Question 2

Changes in the type of milk served appear to reduce the fat content of meals considerably. In 1994, 66 percent of agencies served whole milk but by 1998 only 31 percent did so. Still, only 35 percent of agencies were serving nonfat milk, with most choosing instead 1 percent or 2 percent fat milk.

Table 3 on the following page shows survey responses for changes made in 18 traditionally high-fat food categories. The most common strategy currently employed to reduce fat content of other foods is to make or purchase a lower-fat version of familiar food items. The “average” typically high-fat food item has been modified to lower its fat content by nearly 50 percent of all agencies. Nearly all agencies have made lower-fat changes to at least some of their high-fat food items.

¹ See attached section on Methodology.

Table 3
Percent of Respondents Making One or More Positive Changes*
to Lower the Fat Content of Typically High-Fat Menu Items
(by agency type)

PRODUCT	RCCI (n=271)	Public Elem. (n=357)	Public High (n=63)	Public Unified/ COE (n=339)	Private (n=33)	Total Average (n=1,063)
Salad dressings, dips, mayonnaise	68%	75%	67%	68%	52%	70%
Hot dogs, cold cuts, lunch sausages	64%	68%	81%	65%	52%	66%
Traditionally higher fat bean- based products	66%	70%	67%	56%	52%	64%
Fried chips	70%	69%	51%	54%	42%	63%
Breakfast meats	71%	59%	49%	58%	45%	61%
Cookies, brownies, cakes, pies	65%	60%	57%	54%	45%	59%
Corn dogs	60%	61%	73%	55%	52%	59%
Vegetables with added butter or margarine	58%	59%	56%	56%	42%	57%
Hamburgers/ cheeseburgers	64%	57%	62%	51%	61%	57%
Tacos/taco salad	55%	54%	59%	58%	48%	56%
Whole or 2% milk or flavored milk	37%	56%	54%	58%	33%	51%
Processed fried potatoes	55%	46%	59%	46%	45%	49%
Muffins, breakfast pastries, biscuits, doughnuts, etc.	61%	50%	38%	45%	48%	51%
Burritos	56%	49%	44%	37%	36%	47%
Processed fish products	51%	46%	49%	44%	39%	47%
Processed chicken products	54%	43%	48%	38%	33%	44%
Non green leafy salads	47%	42%	40%	37%	39%	42%
Pizza	51%	43%	33%	35%	30%	41%
TOTAL	59%	56%	55%	51%	44%	55%

*Includes the following: item replaced with a lower fat item, and/or served it less frequently, and/or served a lower fat version, and/or reduced portion sizes.

Another technique is to serve the high-fat item less frequently: 34 percent of traditionally high-fat items were served less frequently. A much less common approach was to reduce portion sizes to reduce fat, a strategy adopted for only 11 percent of high-fat food items. An agency was considered to have made a positive change if they replaced an item with a lower-fat item, served an item less frequently, served a lower-fat version, and/or reduced portion sizes. Salad dressings, hot dogs/cold cuts, burritos, and fried chips were foods most lowered in fat with one or more of the strategies above. Fried potatoes, muffins/pastries, and tacos were least often changed.

An estimate of whether agencies are successfully meeting the *DGA* requirement of 30 percent of total calories from fat is available from analysis of school lunch menus by Nutrient Standard Menu Planning (NSMP) or Assisted Nutrient Standard Menu Planning (ANSMP). These studies show a dramatic drop in the fat content of school lunches in the past eight years.

Table 4
Changes in Percent Fat in School Lunches

Percent Calories from Fat in Lunches	Percent of Districts in 1990	Percent of Districts in 1998
25-30 percent fat	23%	51%
31-35 percent fat	49%	49%
36-40 percent fat	22%	0
41-45 percent fat	3%	0
46-50 percent fat	3%	0

Based on matched data from 85 public school districts.

In 1990, only 23 percent of reporting districts met the under-30 percent fat goal, while in 1998 51 percent met the goal. Virtually none of the 1998 school reporters noted lunch fat content above 36 percent, while 28 percent of the 1990 group reported these higher fat levels. The 1998 figures for the RCCIs were similar to those of public schools, with too little data from private schools for a meaningful analysis. These figures, although from a limited and non-random sample of districts, suggest that **dramatic improvements** have been made in lunches at by California public schools in the past eight years, changes that are supported the documented menu, food content, and serving size changes between 1994 and 1998 previously displayed in this report. Still, about one-half of these reporting agencies have not met the 30 percent fat content goal.

Moderating Salt and Sodium Intake

Table 5 displays traditionally high-salt foods and the percent of respondents who have reduced their salt content.

Table 5
Percent of Respondents Making One or More Positive Changes
to Lower the Salt Content of Typically High-Salt Menu Items
(by agency type)

PRODUCT	RCCI (n=271)	Public Elem. (n=357)	Public High (n=63)	Public Unified/ COE (n=339)	Private (n=33)	TOTAL (n=1,063)
Hot dogs, cold cuts, lunch sausages	52%	41%	48%	34%	27%	42%
Processed fried potatoes such as french fries, hash browns, tots	44%	40%	48%	39%	36%	41%
Burritos	45%	30%	37%	25%	33%	34%
Breakfast meats: bacon, sausage, ham	52%	27%	27%	25%	30%	33%
Hamburgers/ cheeseburgers	39%	34%	33%	25%	30%	32%
Pizza	29%	25%	30%	22%	30%	26%
Processed chicken products such as fried chicken, nuggets, patties, fingers, etc.	37%	23%	32%	22%	9%	26%
Processed fish products such as fried fish patties, sticks, nuggets	32%	22%	37%	20%	21%	25%
TOTAL	41%	30%	37%	27%	27%	32%

Approaches to lowering salt intake were the same as those employed to lower fat: make or purchase a lower-salt version of a product, and/or serve it less frequently, and/or serve smaller portions. On average, 25 to 42 percent of the agencies employed one or more of these strategies, depending on the food items examined. The salt content of hot dogs/cold cuts and fried potatoes was most commonly lowered, while processed fried fish and chicken products had the fewest salt modifications.

Other strategies to lower salt consumption relate to regulating salt added by children, as shown in Table 6.

Table 6
Attempts Made to Limit the Use of Student-Added Salt
(by agency type)

<i>Have you attempted to limit the use of salt since 1994 by....</i>			
	eliminating saltshakers and packets from students' access, but provide salt on request?	eliminating saltshakers and packets from students' access, with no salt on request?	We still provide saltshakers and packets to students on tables or at self-service areas.
Public Elementary	24%	74%	2%
Public High	38%	52%	10%
Public Unified/COE	29%	67%	5%
Private	32%	61%	6%
RCCI	61%	10%	30%

Few agencies still provide saltshakers on tables or at self-service areas (except RCCIs, where the number was considerably higher), attesting to a strong effort to avoid adding salt to foods.

Providing a Diet Moderate in Sugars

The approach taken to reduce sugar content varied greatly by food item. For example, canned fruit, cookies/brownies, and muffins were least likely to be replaced outright with a different food product (2 to 5 percent of the sample did this), while 15 percent had completely stopped serving frozen desserts. Cakes and pudding were served less frequently than in 1994 (about 55 percent of respondents noted this), while only about 21 percent of the respondents reported serving canned fruits less frequently (probably because they were trying to meet the suggestion of serving more fruit in general). Altering portion sizes also varied greatly as an approach to lowering sugar, with only about 10 percent of the sample serving smaller serving sizes of muffins and gelatin, while about 28 percent of the sample reduced cake portion sizes. Some difficulty was encountered in reducing sugared items with grains, because the lowered fat recommendation means calorie requirements must be met with other food items, or in other ways. Although gauging the reduction of sugar in food was difficult to ascertain, agencies seem to be making only modest progress toward lowering sugar intake. Measurement is complicated by the fact that the *DGA* do not specify an amount of sugar as “moderate.”

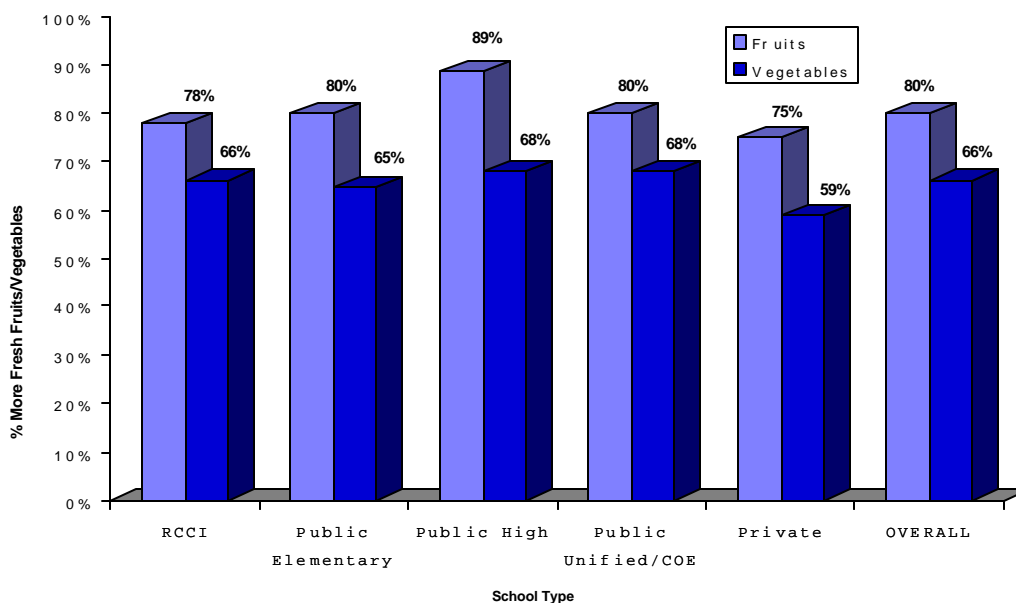
Increasing Fiber with Whole Grains

Only 21 percent of the respondents have replaced 40 to 100 percent of their white flour products with whole-grain versions. Over half the agencies had made this change to 20 percent or fewer of their white flour foods. Shifting to whole grains does not appear to be undertaken by many agencies, although again, since the *DGA* do not specify a level of fiber or whole-grain use, it is difficult to analyze this issue specifically.

Offering Plenty of Fruits and Vegetables

About 66 percent of the agencies report serving more fresh vegetables since 1994, while about 80 percent are serving more fresh fruits.

Chart 1
Percentage of Respondents Who Serve More Fresh Fruits and/or Vegetables
(by agency type)



Question 11a and 11b

Over three-fourths of the agencies report serving “more” frozen or canned fruits and vegetables since 1994, although the amount was not reported. Child nutrition program sponsors seem to be making efforts to incorporate this *DGA* recommendation into their menu planning, although an exact goal for fruit and vegetable volume is not specified.

Efforts in Nutrition Education

Most agencies report that they have made some efforts to educate others about the School Meals Initiative. About 70 percent of elementary school respondents noted that they work with teachers to complement classroom nutrition and health education. This was less common in high schools (46 percent), private schools (55 percent), and RCCIs (66 percent). Direct nutrition education by child nutrition staff was most commonly accomplished through menu articles (84 percent of agencies), wall postings (63 percent), presentations (40 percent), school bulletins (27 percent), and parent newsletters (24 percent). The most common types of information were information on the Food Guide Pyramid (61 percent of agencies), the nutrition/health connection (41 percent), the nutrient content of food (36 percent), and the nutrition/learning connection (36 percent). About 25 percent of the agencies use “garden-based nutrition education activities.” In summary, many agencies are involved in some way with nutrition education, although not usually through direct classroom involvement. The most common approach seems to be supporting classroom education with written communication (menus, bulletins, and newsletters). Elementary schools demonstrate the highest educational efforts.

Barriers to Implementation

Three items stood out as the greatest barriers to implementing the *DGA*: (1) the higher cost of “healthier” food alternatives; (2) children’s unwillingness to accept new or changed foods; and (3) time and costs associated with testing new or modified recipes. These may be issues that the CDE can address in future technical assistance efforts. “Parent issues,” lack of administrative support, and staff unwillingness to accept new or changed foods were rarely listed as barriers, although the advisory committee that helped create the survey instrument thought they might be. Interestingly, only 27 percent of the agencies saw the “availability of inexpensive USDA commodities that do not help meet the *DGA*” as a strong barrier. Apparently, many districts have found a way to make menu changes and still use commodity foods.

Summary

These data demonstrate a conscientious effort on the part of the majority of these agencies to adopt menus with lower fat, lower salt, fewer sugars, higher fiber, more fruits and vegetables, and with more variety. Although further meal revisions are still necessary (and the barriers to some of these changes have been identified in the survey), these agencies are clearly aware of the changes necessary and are finding creative ways to meet the challenges of the *DGA*.

Appendix A - Study Methodology

The “1998 United States Dietary Guidelines for Americans Survey” was developed with the cooperation and collaboration of an advisory team that consisted of the Nutrition Education Training Program staff from the CNFDD, child nutrition personnel from a cross section of Northern California schools, and the evaluators from Duerr Evaluation Resources. In this process, the focus of the survey was established and past survey questions were examined and discussed for incorporation into the new survey. Also, new areas of questioning were determined, the length and answer format were discussed, and the ability of potential respondents to accurately respond to the same questions where different situations apply was analyzed.

As a result, two versions of the survey were developed: one version for unified school districts (K-12 and 1-12 grade levels) and a basic one for all other recipients. Both versions had identical questions, but the unified version was formatted so that respondents could provide information separately for their elementary and secondary sites if their food services were very dissimilar. The survey was finalized through a process that included advisory team and state staff input and revisions, focus groups, and field testing.

Once the survey was finalized, it was mailed with a cover letter from the Director of the CNFDD. The surveys were mailed with the CDE return address; included in the envelopes were self-addressed return envelopes to the evaluators. The survey was not entirely confidential nor was it mandatory. Respondents were asked to supply their names, agencies, and telephone numbers to assist with survey reminder mailings and to provide them with personalized information from the evaluator for their own use such as marketing their program.

The survey was mailed to all public school districts, RCCIs, private schools, and county offices of education who were sponsors of the NSLP and/or the SBP in the 1997-98 school year. Surveys were mailed to 884 public schools; 455 RCCIs; 64 private schools; and 31 county offices of education.

After three mailed reminders and numerous telephone calls, an overall response rate of 70 percent was achieved. The largest dataset was from California public schools with a 77 percent response rate, but because larger districts were more prone to respond than were smaller ones the responding districts represent 81 percent of all students enrolled in California’s public schools. The precision of the response set for public schools is ± 2 percent. The response for public schools is extremely representative of all public school child nutrition programs in California. Response precision for the RCCIs was somewhat better than ± 4 percent. This is traditionally considered a strong precision and yields good sample estimates for California RCCIs in the national child nutrition programs. Private school precision was weaker at about ± 10 percent at the 90 percent confidence interval, so great caution should be exercised in interpreting the private school data.

Acknowledgments

The *1998 United States Dietary Guidelines for Americans Child Nutrition Programs Implementation Survey* was conducted for the Nutrition Education and Training Program, California Department of Education under contract number 7150 to Duerr Evaluation Resources. Those involved in producing this report at Duerr Evaluation include:

- Mark Duerr, Evaluation Director
- Barbara Noble, Research Associate
- Joan Jackson, Research Associate
- Shawn Rogers, Technical Assistant

Many others contributed to the development of the project, including the Development Group who helped shape and pilot test the instrument:

- Kerri Braverman, Director of Student Nutrition Services, Vallejo City Unified School District
- Patricia Gemmell, Cafeteria Manager, Colfax Elementary School District
- Sue Lange, Director of Food Services, Washington Unified School District
- Dana Malone, R.D., Registered Dietitian, San Juan Unified School District
- Lisa McGregor-Peters, R.D., Supervising Nutritionist, Sacramento City Unified School District
- Brenda Padilla, M.S., Director of Child Nutrition, Vacaville Unified School District

The following staff from the Nutrition Education and Training Program, California Department of Education, gave invaluable assistance and support:

- Duwayne Brooks, Director, Child Nutrition and Food Distribution Division
- Sally Livingston, M.A., R.D., Administrator
- Bonnie Branstrom, R.D., Nutrition Education Consultant and Project Coordinator
- Nancy Link, M.S., R.D., Nutrition Education Consultant
- Kathy Mackey, R.D., Child Nutrition Consultant
- Cindy Schneider, R.D., M.P.A., Child Nutrition Consultant

This project was funded in part by the United States Department of Agriculture (USDA). The USDA prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Ave. SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer. For information about the report, call Duerr Evaluation Resources at (530) 893-3734.